

(No Model.)

T. W. SHEPHERD.
METALLIC THERMOMETER.

No. 375,576.

Patented Dec. 27, 1887.

Fig: 1.

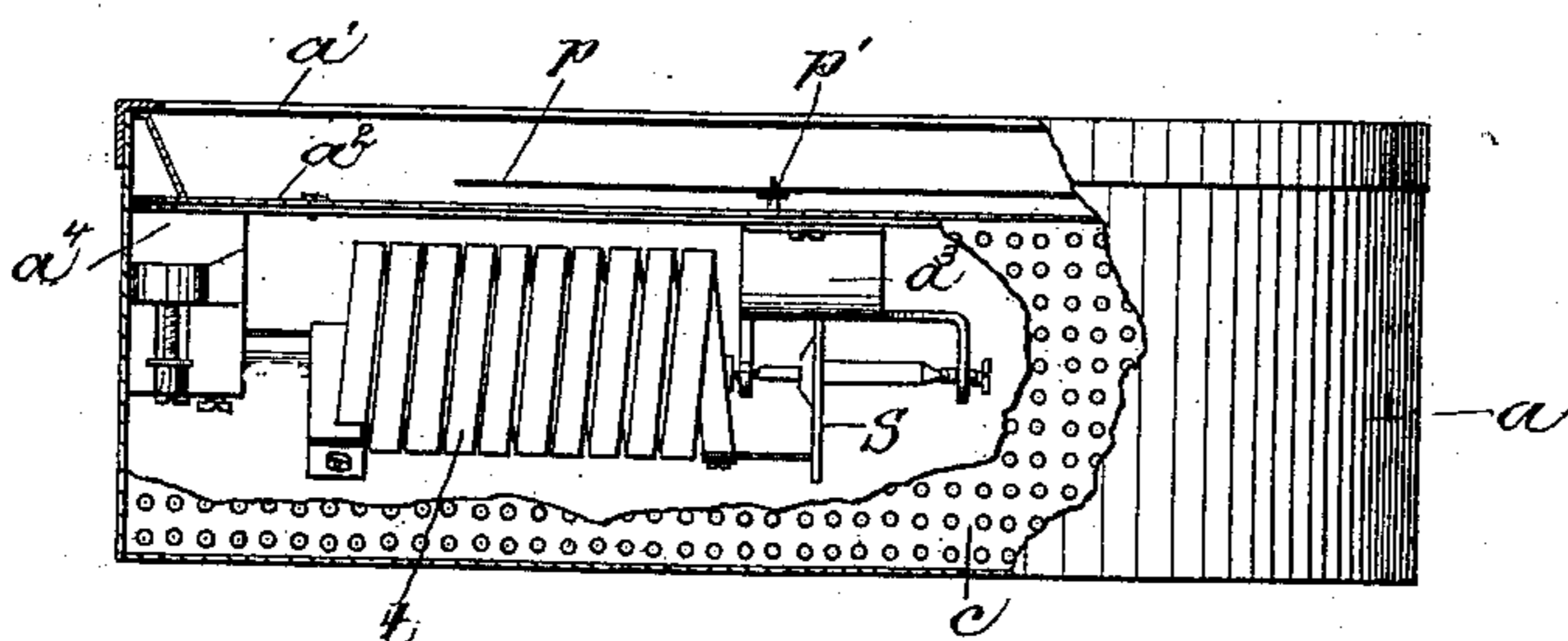
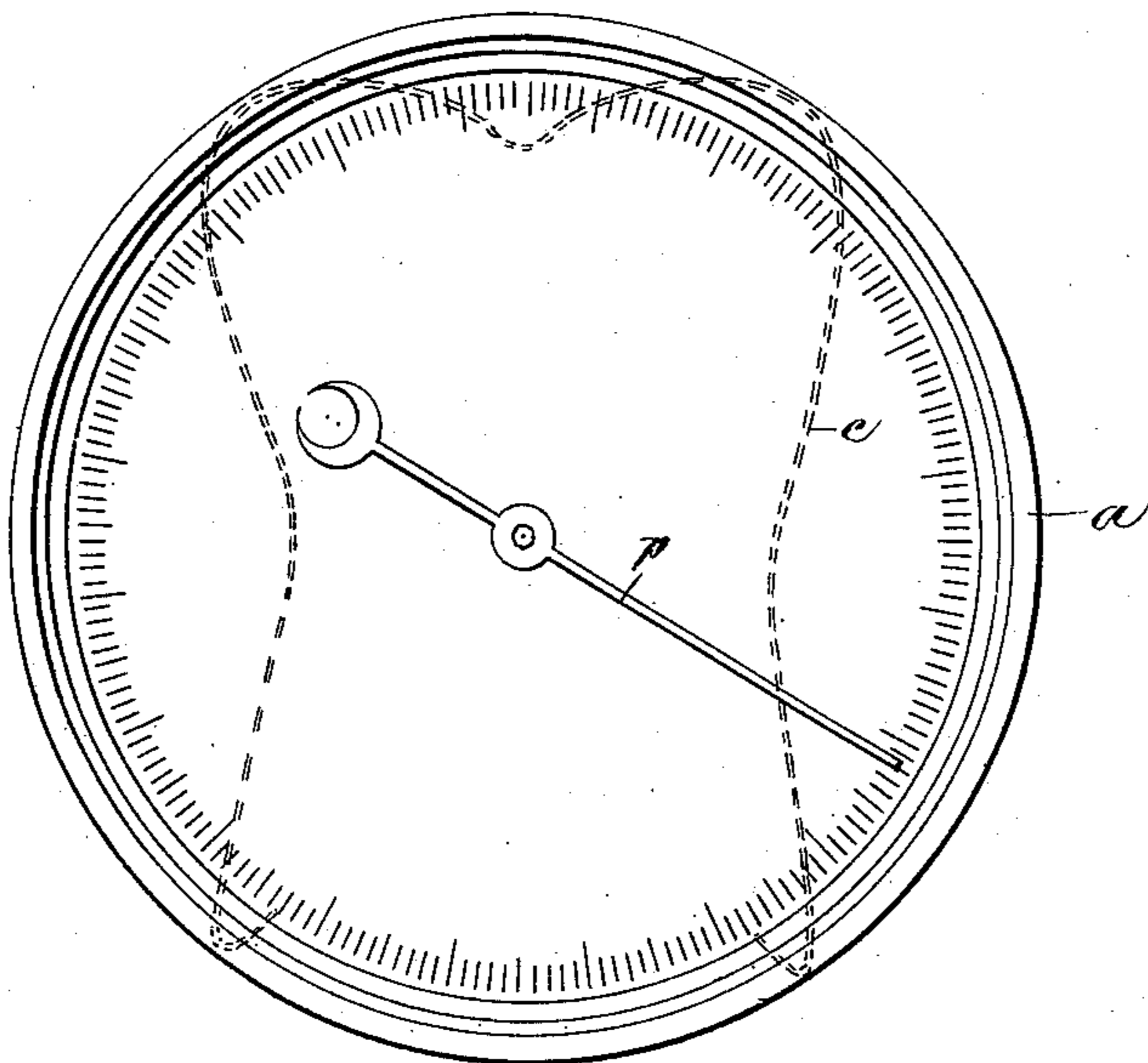


Fig: 2.



Witnesses.

Fred L. Emery.
John F. C. Printz

Inventor.

Thomas W. Shepherd.
by Crosby & Gregory attys.

UNITED STATES PATENT OFFICE.

THOMAS WM. SHEPHERD, OF PEABODY, MASSACHUSETTS.

METALLIC THERMOMETER.

SPECIFICATION forming part of Letters Patent No. 375,576, dated December 27, 1887.

Application filed February 18, 1887. Serial No. 228,058. (No model.)

To all whom it may concern:

Be it known that I, THOMAS WM. SHEPHERD, of Peabody, county of Essex, and State of Massachusetts, have invented an Improvement in Thermometers, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In the manufacture of thermometers of the class known as "metallic thermometers" much difficulty has been experienced in supporting the thermal strip or coil in such a manner that it shall be entirely free from contact with the inclosing-case, to thereby more reliably respond to the exact variations in temperature.

This invention has for its object to provide a metallic thermometer with efficient means for supporting the thermal strip or coil and its co-operating parts free from contact with the inclosing-case, the means employed being such that free circulation of air is permitted throughout the chamber in which the said coil is supported, that the coil may be most susceptible to the changes in temperature and more reliably responsive.

In accordance with this invention the thermal strip or coil is supported upon the under side of the dial, and the pointer which sweeps over the dial is actuated by means of the thermal coil. The dial thus supporting all the operating parts is placed within the inclosing-case and made to rest upon the upper edge of a perforated supporting-strip, the width of which is sufficient to support the dial so that the thermal strip will be free from contact with the inclosing-case.

Figure 1 shows in side elevation a metallic thermometer, partially broken away, to more clearly illustrate the present invention; and Fig. 2, a top view of the thermometer, the dotted line representing the perforated supporting-strip.

The inclosing-case a is of usual size and shape to contain all the co-operating parts within it, the said case having a glass face-plate, a' . The dial a^2 , preferably of sufficient diameter to snugly fit the inclosing-case, is provided upon its under side with suitable supporting-blocks, a^3 a^4 , which support the brackets

which serve as bearings for the shaft to which the thermal coil t is attached. A pointer, p , is fixed to an arbor, p' , turning in the dial, the said arbor carrying a pinion, (not shown,) which is engaged by the teeth of a sector, s , connected with the thermal coil, so that as the said coil is moved by changes in the temperature the pointer p will be moved over the dial. The dial a^2 , thus supporting all the co-operating parts, is placed within the inclosing-case a and supported by the perforated supporting-strip c . The strip c is preferably made of sheet-tin of suitable width and length to be bent and fitted into the inclosing-case and to support the dial a sufficient distance above the wall of the inclosing-case to keep the thermal coil free from contact therewith, so that the said coil will be more susceptible to changes in temperature and more reliable, it not being influenced in any way by the temperature of the surrounding metallic case.

By employing a perforated supporting-strip the air contained within the chamber formed within the case is free to circulate, and the co-operating parts of the thermometer are supported free from the influence of any local causes which would tend to decrease its reliability.

The supporting-strip, as herein described, is very cheap, and, being simply placed within the inclosing-case and not fastened, no labor is involved.

I am aware that the dial-plate of a metallic thermometer has been supported by means secured to and projecting inward from the case, but with such means a fastening is employed, which shows through the walls of the case, which, besides being expensive, is objectionable as unsightly, and if the interior of the case is provided with a shoulder to support the dial the case must be very thick, and in such instance the thermal coil will not be as sensitive as necessary.

I claim—

In a thermometer, the pointer, the thermal strip, and connecting means actuated by the thermal strip for moving the pointer, and the dial supporting all the said co-operating parts, an inclosing-case for the dial and the parts supported by it, combined with a perforated

supporting-strip, c, placed loosely within the
inclosing-case upon which the dial rests, the
width of such supporting-strip being sufficient
to retain all the co-operating parts free from
5 contact with the said inclosing-case, all sub-
stantially as described.

In testimony whereof I have signed my name

to this specification in the presence of two sub-
scribing witnesses.

THOMAS WM. SHEPHERD.

Witnesses:

GEO. HOLMAN.

THEODORE HOLMAN.